

### REMARKS/ARGUMENTS

Claims 1-58 are pending in the application and presented for examination.

Claims 1 and 10-58 are withdrawn from consideration and claims 3 and 4 are currently amended.

#### **I. FORMALITIES**

Support for the amendment to the claim set is found throughout the specification as originally filed. More particularly the amendment to claims 3 and 4 adds the structural definitions given on pages 16-28 and in claims 14, 16, 18, 19, 21, 23, 25, 26, 28, 30, 32, 34 and 36. These amendments find support in the original specification and the claims, thus, no new matter is introduced in this or any other portion of the present amendment. Reconsideration of the application is respectfully requested in view of the amendment to the claim set and the following remarks.

#### **II. REJECTION UNDER 35 U.S.C. § 102**

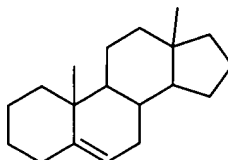
Claims 2 and 5-7 were rejected under 35 U.S.C. §102(b) as being allegedly anticipated by the disclosures of (a) Theisen *et al.* *Tet. Lett.* 33(35): 5033-5036 (1992) and (b) Brush *et al.* U.S. Patent No. 5,583,236.

To anticipate a pending claim, a prior art reference must provide all limitations of the claim (*see* MPEP §2131, citing *Richardson v. Suzuki*, 868 F.2d 1226 (Fed. Cir. 1991)).

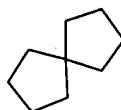
Independent claim 2 is drawn to a method for preparing a fluorescent dye-labeled phosphoramidite reagent, said method comprising:

- (a) contacting a fluorescent dye-**fused lactone** derivative with a linking group component to form an intermediate fluorescent dye-labeled linking group; and
- (b) contacting said intermediate fluorescent dye-labeled linking group with a phosphoramidite moiety under conditions sufficient to covalently attach the phosphoramidite moiety to said fluorescent dye-labeled linking group and form said fluorescent dye-labeled phosphoramidite reagent (emphasis added).

Therefore the methods of the invention use compounds with a fused lactone ring. A fused ring is a ring having **one or more of its sides in common** with another ring as shown below:

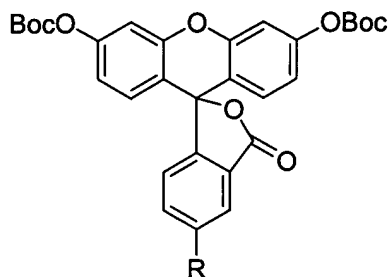


whereas a spiro system is two rings having **one atom in common** as shown below:



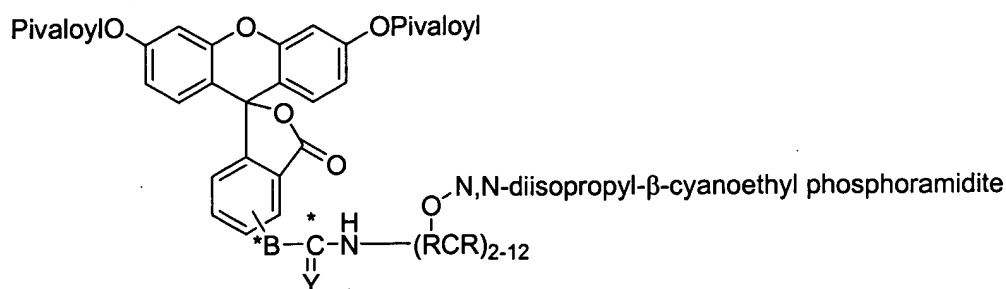
(see *Hawley's Condensed Chemical Dictionary*, 14th Ed. p 522 and 1037). Applicants respectfully submit that this element of the claims now pending has not been disclosed in the references cited above. Therefore, Applicants respectfully traverse the rejections.

The Patent Office alleges that Theisen *et al.* disclose a method for making a fluorescent dye-labeled phosphoramidite reagent using a fluorescent dye-fused lactone derivative and cites the compounds disclosed in Theisen *et al.*'s Figure 1 (see pages 2 of the Office Action). In Figure 1, Theisen *et al.* disclose the following **spirolactone** compounds:



wherein R is CO<sub>2</sub>H or a phosphoramidite. Because the compounds disclosed in Theisen *et al.* do not comprise a **fused lactone**, Talebian *et al.* do not anticipate the compounds of claim 2 under 35 U.S.C. §102(b).

The Patent Office also alleges that Brush *et al.* disclose the reaction of fluorescent-dye labeled lactones (see pages 3 of the Office Action). In Figures 1-6, Brush *et al.* disclose the following **spirolactone** compounds:



wherein R is H or C<sub>1-6</sub> alkyl. Because the compounds disclosed in Brush *et al.* do not comprise a **fused lactone**, Brush *et al.* do not anticipate the compounds of claim 2 under 35 U.S.C. §102(b).

Because the cited references do not anticipate independent Claims 2, these references do not anticipate claims 5-7 which depend therefrom. Accordingly Applicants submit that the cited references fail to anticipate the present invention and respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(b).

### III. REJECTION UNDER 35 U.S.C. § 103

Claims 8 and 9 were rejected under 35 U.S.C. §103 as being allegedly anticipated by the disclosures of Theisen *et al. Tet. Lett.* 33(35): 5033-5036 (1992) (*See* Office Action at page 3). In response, Applicants respectfully traverse the rejection.

As noted above, claim 2 of the present application and claims 8 and 9 which depend therefrom focus on a method for preparing a fluorescent dye-labeled phosphoramidite reagent, said method using a fluorescent dye-**fused lactone**. Claim 8 is directed to a method in accordance with claim 2, wherein said linking group is cyclic and comprises a five-membered heterocycle and claim 9 is directed to a method in accordance with claim 8, wherein said cyclic linking group is a prolinol linker.

Theisen *et al.* does not identify all of the elements of the rejected claims because it does not teach or suggest using such linking groups with a fluorescent dye-**fused lactone**. In addition, while Thiesen *et al.* may teach that a prolinol group can be reacted with a spirolactone reagent, this limited teaching of Theisen *et al.* would fail to motivate one skilled in the art to prepare any compounds other than ones containing a single lactone group which is spiro. Theisen *et al.* does not teach or suggest how to selectively react such a linking group in the

presence of a second or fused lactone functional group. Because there is no teaching or suggestion in the cited reference of reacting a prolinol linking group with a compound with a second or fused-lactone, one of ordinary skill in the art would not be motivated to use the reference to arrive at the methods of the present invention.

Because all of the elements have not been identified by the cited reference, the claims of the present invention would not have been *prima facie* obvious to one of skill in the art. In addition, because there is no suggestion in the cited reference of using the linking group in the presence of a second or fused lactone as recited in the amended claims, the Applicants respectfully request reconsideration and that this rejection be withdrawn.

#### **IV. REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH**

The Patent Office has rejected claims 3 and 4 under 35 U.S.C. § 112 second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. More specifically, the Patent Office alleges that the structures of the dyes must be recited in the claims.

Applicant's have amended claims 3 and 4 to include a structural definition of the dyes recited in the claims. In view of the above, Applicant's believe the claims are now definite and respectfully request reconsideration and withdrawal of the rejections of claims 3 and 4 under the second paragraph of 35 U.S.C. § 112.

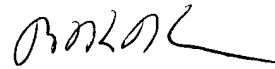
Appl. No. 10/026,374  
Amdt. dated March 15, 2005  
Reply to Office Action of December 16, 2004

PATENT

**CONCLUSION**

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

Respectfully submitted,



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